DOCUMENT RESUME

ED 142 004 EC 101 362

AUTHOR Friedman, Ronald S.
TITLE The Peer-Peer Program: A Model Project for the Integration of Severely Physically Handicapped Youngsters with Nondisabled Peers.
INSTITUTION Human Resources School, Albertson, N.Y.
SPONS AGENCY New York State Education Dept., Albany. Div. of Drug and Health Education Services.
PUB DATE Aug 75
NOTE 41p.
AVAILABLE FROM Human Resources School, Albertson, New York 11507 (free while supply lasts)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Elementary Education; Exceptional Child Research; Intermediate Grades; *Peer Acceptance; *Peer Relationship; *Physically Handicapped; Program Descriptions; *Regular Class Placement; Severely Handicapped; Student Attitudes

ABSTRACT

Described is the development and evaluation of a demonstration project in which severely physically handicapped sixth grade children in a special school, are integrated into specific activities with their nonhandicapped peers in a nearby public school. Planning sessions are discussed, and such shared activities as the physical fitness group, swimming group, and nutrition group are reviewed. Results of the Attitudes Towards Disabled Persons Scale--Revised for Children indicated that nondisabled children involved in the Peer-Peer Program showed a significant positive shift in attitudes when compared to a control group. (CL)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED142004

EC

The Peer-Peer Program:

A MODEL PROJECT FOR THE INTEGRATION OF SEVERELY PHYSICALLY HANDICAPPED YOUNGSTERS WITH NONDISABLED PEERS

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Text:

Ronald S. Friedman, Ph.D.
Project Director/Psychologist

HUMAN RESOURCES SCHOOL
Albertson, New York 11507

Richard M. Switzer
Project Administrator/Headmaster

Prepared and printed under the provisions of Grant Project #44952, Division of Health and Drug Education Services, State Education Department, Albany, New York.

August, 1975

EC 101362

ACKNOWLEDGMENTS

The Peer-Peer Program owes its success to the combined efforts of many people. Deep appreciation is offered to the children, parents, faculty members, and administrators of Human Resources and Center Street Schools for making the Peer-Peer Program a reality.

Special thanks to teachers, Carol D'Ambrosio and Estelle Levy; media specialist, Jeff Baskin; and the school nurse-teacher, Judy Davidson, for their efforts in planning the goals and curriculum and working with the children in the Peer-Peer Program. Thanks to Mitch Carucci, Human Resources School Photographer, for capturing special moments on film.

In addition, appreciation for their help is extended to Richard M. Switzer, Headmaster of Human Resources School, and Robert M. Gibney, Assistant Headmaster of Human Resources School; also, to Dr. Marie Meier, consulting psychologist, and Ruth Velleman, librarian, for their cooperation and enthusiasm.

Gratitude is also expressed to John J. Crowley, Principal of Center Street School, and Dr. Norman Haweeli, Superintendent of School, and the Herricks School Board for their interest and enthusiasm in the goals of the Peer-Peer Program.

A final note of sincere appreciation is extended to Raphael Simches, Director, Division of Development Support Services, Thomas W. Heath, Administrator, Division of Inter-Cultural Relations and Non-Public School Services and Anthony S. DiBenedetto, Chief, Bureau of Drug Education for their aid and support of this project.

FOREWORD

The Peer-Peer Interactive Program represents an important step in the development of public awareness regarding the potentialities and capabilities of the disabled.

This report demonstrates that we can indeed change attitudes toward the disabled, and do so quite effectively at early ages. For many of the children of the Center Street School, this program was their first exposure to disabled people. Over the year, they learned to accept and appreciate our handicapped children as friends and companions in work and play.

In my capacity as Chairman of the White House Conference on Handicapped Individuals, I have had the opportunity to observe the progress of nationwide efforts to mainstream disabled children into neighborhood schools. The Peer-Peer Interaction Program provides a fundamental and essential groundwork for this effort.

Henry Viscardi, Jr.
President

CONTENTS

Page

ACKNOWLEDGEMENT i

FOREWORD ii

LIST OF TABLES v

REGENTS OF THE UNIVERSITY vi

INTRODUCTION 1
Aim of the Project 2

METHODS & PROCEDURES 3
Program Format 3
School District 3
Frequency of Contact 3
Children Selected 5
Small Group Activities 5
Informal Activities 6
Outside Activities 6
Parent Night 7

Planning Stages 7
School District 7
Faculty Orientation 7
Parents 7
Students – Nondisabled 8
Students – Disabled 9
Students – Disabled and Nondisabled 10
"Rap" Sessions 11
Curriculum Areas 12

Curriculum Activities 12
Nutrition Group 12
Mental Health Group 14
Physical Fitness Group 16
Swimming Group 17
Planetarium Group 17

Psychometric Measures 18
Attitude Measures 18
Attitude Towards Disabled Person Scale 18
Attitude Towards Disabled Persons–Revised for Children Scale 19
Structured Questionnaires 19

RESULTS & DISCUSSION 20
Attitude Towards Disabled Persons–Revised for Children Scale 20
Structured Questionnaire 23
Child Evaluation Form 23
Parent Evaluation Form 24

CONCLUSIONS AND RECOMMENDATIONS 25

REFERENCES 27

APPENDICES 28
ATDP – Revised for Children (Form A) 28
ATDP – Revised for Children (Form B) 30
Child Evaluation Form 32
Parent Evaluation Form 33

LIST OF TABLES

		Page
1.	Means and Standard Deviation on the ATDC for Nondisabled and Disabled Children Before and After the Peer-Peer Program	20
2.	Differences of Attitude Scores on the ATDC Between Groups Before the Peer-Peer Program	21
3.	Comparison of Mean Difference Scores and S.D. on ATDC Before and After the Peer-Peer Program	22
4.	Child Evaluation Form	32
5.	Parent Evaluation Form	33

THE UNIVERSITY OF THE STATE OF NEW YORK

Regents of the University (with year when term expires)

1981	Theodore M. Black, A.B., Litt.D., LL.D., Ph.D., D.C.L. Chancellor	Sands Point
1987	Carl H. Pforzheimer, Jr., A.B., M.B.A., D.C.S., H.H.D. Vice Chancellor	Purchase
1978	Alexander J. Allan, Jr., LL.D., Litt.D.	Troy
1981	Joseph C. Indelicato, M.D., L.H.D.	Brooklyn
1986	Kenneth B. Clark, A.B., M.S., Ph.D., LL.D., L.H.D., D.Sc.	Hastings on Hudson
1983	Harold E. Newcomb, B.A.	Oswego
1988	Willard A. Genrich, LL.B., L.H.D., LL.D.	Buffalo
1982	Emlyn I. Griffith, A.B., J.D.	Rome
1977	Genevieve S. Klein, B.S. M.A.	Bayside
1981	William Jovanovich, A.B., LL.D., Litt.D., L.H.D.	Briarcliff Manor
1983	Mary Alice Kendall, B.S.	Irondequoit
1984	Jorge L. Batista, B.A., J.D.	Bronx
1982	Louis E. Yavner, LL.B.	New York
1979	Laura B. Chodos, B.A., M.A.	Clifton Park
1980	Martin C. Barell, B.A., I.A., LL.B.	Great Neck

President of the University and Commissioner of Education

Edwald B. Nyquist

Executive Deputy Commissioner of Education

Gordon M. Ambach

Deputy Commissioner for Elementary, Secondary, and Continuing Education

Thomas D. Sheldon

Associate Commissioner for Instructional Services

William L. Bitner

Associate Commissioner for Educational Finance and Management Services

Stanley L. Raub

Assistant Commissioner for Education of Children with Handicapping Conditions

Dr. Bernice Kipfer

Director of Division of Development Support Services

Raphael F. Simches

Administrator, Division of Inter-Cultural Relations and Non-Public School Services

Thomas W. Heath

Chief, Bureau of Drug Education

Anthony S. DiBenedetto

INTRODUCTION

The purpose of this monograph is to explain the background, formation, and the results of a Peer-Peer Interaction Program. This is a demonstration project supported by the New York State Education Department, Division of Health Education in which a group of severely disabled physically handicapped youngsters, who attend a school for exceptional children, are given the opportunity to have frequent, ongoing contacts with their peers in a neighborhood elementary school. The activities and curricula were modified so that each child could fully participate in the program. The contacts between the children were designed to be as positive and rewarding as possible so that positive attitudes towards disabled children could be encouraged. As a result of this program it was hoped that nondisabled children would gain a greater acceptance of and sensitivity towards exceptional children, and that disabled children would gain a greater amount of self-respect.

Innovative programs can be developed to meet the educational needs of the severely physically handicapped. Suitable transportation is needed to bring children in wheelchairs and litters to school. The school building should compensate for architectural barriers, such as staircases and narrow doorways, and be adapted with modified bathrooms, ramps, adjustable desks, etc. The school should be staffed with qualified medical personnel to supervise the administering of medication, note any changes in the child's condition, help educate the teachers to the medical needs of each child, and provide direction for any medical emergency. Aides are needed to help toilet children. A physical therapy program is extremely helpful in providing a regimen of physical activity to keep each child as physically fit as possible. The services of the psychologist and guidance counselor are needed to assess each child's abilities and help educate the child, parent, professional staff and public to the nature and needs of children with physical disabilities. Administrators are necessary to modify curriculum and create programs to adapt sports and gymnastics, cooking and sewing, driver education, science, dramatics, music and art to children with limited movement of legs, arms, and hands.

In creating a specialized program for the severely handicapped, a healthy acceptance by staff members of each child's disability and physical limitation is critical. There must be a delicate balance of emotions so that sensitivity and support of the child's needs will not turn into over protection. Specialized programs can produce dramatic results in terms of educating, training, socializing, and developing a handicapped population. However, specialized programs can diminish the students' integration in the community. Every handicapped youngster should be integrated and accepted in his or her community. The "mainstreaming" concept also professes that the community can be enriched from interacting and observing the talents and skills of people who may be different in some ways from themselves.

The right to be integrated has followed the civil rights movement which attempts to prevent segregation of minorities. This has led to court and legislative decisions to force the integration of previously segregated populations. A recent Tennessee school law states that:

> To the maximum extent practical, handicapped children shall be educated along with children who do not have handicaps and shall attend regular classes. Impediments to learning and to the normal functioning of handicapped children in the regular school environment shall be overcome by the provision of special aids and services rather than by separate schooling for the handicapped. [Tennessee Law, 1972]

The New York State Board of Regents, in recognizing the importance of mainstreaming, has made a strong commitment to this policy in stating:

> The quality of many publicly operated or supported educational programs is related to the degree to which children with handicapping conditions are grouped or otherwise combined effectively with other children in the mainstream of our school and society. [Education of Children with Handicapping Condition]

There can be little disagreement with the philosophical belief that integration into the mainstream of community life is a priority for the handicapped. The placement of severely disabled youngsters in regular schools, however, does not necessarily provide an opportunity for the growth or acceptance of the youngster by his nondisabled peers. Studies have indicated that when severely handicapped youngsters are integrated in a regular school setting, they may meet with negative social attitudes. They are often segregated from their nondisabled classmates and often receive a high degree of rejection from their classmates on social distance and sociometric measures. [Force, 1956, Centers & Centers, 1963].

Attitude studies suggest that the physical presence of a disabled youngster in a nondisabled peer group does not necessarily result in his acceptance. Programs which attempt to mainstream handicapped youngsters may in actuality tend to discriminate and isolate these children rather than include them in the group. This phenomenon can be explained by the fact that severely disabled children are often excluded from gym activities, science labs, lunchrooms, field trips, and extracurricula activities. These exclusions tend to emphasize differences of the handicapped from other people, rather than stressing their similarities. The disabled youngster, rather than feeling competent, self-sufficient, and able to provide talents to hhis new peer group, can easily feel frustrated with his disability and devalued as a human being.

New York State Education Commissioner Nyquist articulately states:

> The victim of an excess of zeal, a severely handicapped child inappropriately placed in a regular classroom is in a difficult situation. Facing new pressures and demands, this child can withdraw and lose the self-confidence that he needs to survive.

The Commissioner goes on to state:

> Although classroom placement might not meet the needs of a severely disabled child, mainstreaming for him can include participation in social or extracurricular activities in the public school. [Nyquist, 1974]

AIM OF THE PROJECT

Physically disabled children are very often confined to their homes and have little contact with neighborhood youngsters. They often feel inadequate or unable to compete in activities with neighborhood peers. Bicycle riding, competitive sports, and socializing with other youngsters is often dreaded and avoided. The disabled youngster therefore is usually isolated except for family members.

The disabled child needs to bridge the gap between his home and the outside world. Human Resources School provides the transition. Human Resources School, Albertson, L.I., N.Y., is a state-supported school which offers an educational program from infancy through high school for youngsters with orthopedic and other physical disabilities. The children, prior to admission to the school, had been placed on homebound instruction by their local school districts which did not have educational programs to meet the special needs of these children. The Human

Resources School building contains a minimum of architectural barriers. It offers complete medical, psychological, and guidance services; and an array of courses and extracurricular activities adapted for the disabled.

The school has accepted the primary responsibility for educating these youngsters. It is felt that severely disabled children will grow and develop well in this type of adapted environment. An individualized educational program can lead to feelings of independence, self-worth, and motivation to explore new experiences.

One type of new experience which the school seeks to provide is the contact of disabled children with their nondisabled peers in the community. A Peer-Peer Interaction Program was proposed which gave a group of children from Human Resources School the opportunity to meet and work with a group of peers from a "regular" elementary school. Activities were structured and modified so that every child interacted and contributed his skills to the program. An ongoing interactive program between disabled and nondisabled children can:

1. Help re-educate the community to the abilities, as well as realistic limitations of disabled people.

2. Help develop positive social attitudes towards the disabled.

3. Provide a rewarding experience for disabled youngsters, thus encouraging further contact with other nondisabled people.

4. Develop cooperative projects which will utilize the skills and talents of each child, disabled and nondisabled. This can help the disabled, (as well as the nondisabled), to have more positive feelings towards handicapped people, hence toward themselves.

5. Provide a mechanism by which disabled children will feel a part of the larger community setting.

METHODS & PROCEDURES

PROGRAM FORMAT

School District

The goals of the Peer-Peer Interaction Program necessitate ongoing, continuous contact with a neighborhood school system. Planning joint activities with a nearby school district helps give the children a sense of community involvement. It also limits the amount of travel time needed to bring the groups of children together. Contact with a neighborhood school district also facilitates educating the parents and faculty members in the district and adds to the exposure which the community has had to Human Resources Center's programs through fund raising activities and cultural events.

Frequency of Contact

It was felt that at least two contacts a month were needed to achieve the goals of the program. The meetings were held at both Human Resources School and the neighborhood elementary school. This allowed both groups of children to have exposure to and an understanding of each other's milieu.

Children Selected

PEER-PEER PROGRAM GROUP

Disabled

A sixth grade class was chosen from Human Resources School comprised of one female and eleven males. The average age of the group was 11 years. Disabilities represented were as follows: Legg Perthes, sickle cell thalasemia, osteogenesis imperfecta, rheumatoid arthritis, spina bifida, muscular dystrophy, hemophelia, post-quadraplegia, brain tumor, Kugelberg-Welander disease. All children in the class were judged to have at least average intelligence.

Nondisabled

A fourth grade class of twelve males and eighteen females with an average age of 9 years was selected from the neighborhood elementary school. It was initially felt that because of the limited outside social experience of the disabled group, a contact with children slightly younger that they would be less threatening, and more equated as to social maturity. This class was composed of children who were judged to have at least low average intellectual ability.

CONTROL GROUP

Since an aim of the Peer-Peer Program was to determine attitude change by the use of objective measures, it was felt necessary to include control groups of nondisabled and disabled children for comparison of attitude scores.

Disabled

A group of fourteen sixth grade children was selected from Human Resources Summer Day Camp to serve as controls. Six were females and eight were males. These children were of a comparable age and socioeconomic level; however, they did differ in terms of intellectual and achievement ability with some children performing below grade level in reading and mathematics. This difference was unavoidable because of the limited number of disabled children of this age range attending camp.

Nondisabled

A fourth grade class of twenty-five children; thirteen males and twelve females, was selected from another elementary school in the same district as the Control Group. Another school was chosen to prevent the effects of possible informal contact or exposure as influence on the Control Group by friends of children involved in the program. This class was judged to be highly similar by the building principal to the class in the program in terms of socioeconomic level and intellectual ability.

Small Group Activities

If the children were to gain personal knowledge of each other and were to work in close contact with a common purpose, then small group activities were thought to be the best format. Five groups of children were formed. Each group had a specific area in health education in which they were to work. The groups were nutrition, physical fitness, friendship, swimming, and ecology. Each group contained approximately six nondisabled children and two disabled children.

Each group of children was put under a teacher's supervision. Since the groups were relatively small, each teacher was able to supervise the group, deal with any questions, and provide direction for the group experience.

It was felt important to give each group a goal toward which to work. This could be a project, a demonstration, a report, or the learning of some new skills. The interreliance of all members for the completion of the group goal was an aim of the program. Each member's contribution would accent his skill and talents. This, hopefully, would contribute to a feeling of cooperation and respect for each individual's contribution.

Informal Activities

Each group meeting would be during a morning session at either of the schools. After the group activities, the two classes were brought together for lunch. This was considered as a good informal time period when the children could socialize and interact with a minimum of direction. After lunch, quiet group games were provided such as chess, checkers, cards, etc. These games represented some of the activities that these children could utilize on an informal basis with friends outside the school setting.

The lunch experience had another rationale. This was an opportunity for the nondisabled youngsters to view their disabled peers in their activities of daily living. Special diets, modified utensils, and special help needed during feeding could be observed. The children were allowed to go to the bathroom after lunch. This provided another valuable experience as to the special needs of some of the disabled children.

Outside Activities

A field trip was also planned for the program. This would be an interesting experience outside the protective school setting. It would give the nondisabled children insights as to the architectural barriers that their disabled peers had to contend with. It also would demonstrate the social attitudes which disabled people encounter. The stares, the whispers, the feelings of pity and avoidance could be demonstrated in such an experience.

Parent Night

The Peer-Peer Interaction Program was planned so that each group would have a final product, skill, or activity as a result of their efforts. It was felt that the parents should share in the excitement and innovative nature of the program. Having the parents view their children, both abled and disabled, interacting comfortably with another group of children could have important effects on their attitudes and feelings towards the physically disabled

At the end of the school year, parents were invited for an "open school night" meeting. Each of the five groups of children – the friendship, nutrition, gym, swimming, and ecology groups demonstrated the activities and projects which they had been working on that term. Groups of parents rotated to each of the areas to see their child's group, as well as the other groups in action. All of the parents were then brought together and encouraged to express their feelings about the program. A questionnaire was distributed to determine the parent's evaluation of the Peer-Peer Program.

PLANNING STAGES

School District

The Herricks School District in Albertson, New York, was chosen as the cooperating school district. The district is composed mainly of families in the middle socioeconomic range. Administrators, teachers, and students in the Herricks School District have traditionally been receptive to the students at Human Resources School. Herricks High School students have frequently volunteered their services to Human Resources School. The Herricks School Board, after reviewing the aims of the Peer-Peer Program, gave its support for its implementation. A class from the Center Street Elementary School was chosen to interact with a sixth grade class at Human Resources School. Permission to administer to the children an attitude scale towards disabled children before and after the program was obtained. The scale provided an objective measure of any change of attitudes as a result of the interchange.

Faculty Orientation

Three faculty orientation meetings were held. The first included the staff and administrators directly involved in the implementation of the Peer-Peer Program. The two principals, project director, teachers, and school nurse-teachers were present. The aim of the program, scheduling, curriculum areas and orientation of the parents and children involved were discussed.

The other two meetings involved the separate staffs from Human Resources and Center Street schools. It was felt that the entire staffs from both schools and their classes could be directly affected by their observations of the Peer-Peer Program. The aims and activities of the program were described and additional suggestions were encouraged. These meetings gave the staffs insight into the program and a feeling that in some way they were involved. Interest on their part served as a stimulus for an expansion of the program and provided information to the other students in the school. It was felt that if the teachers held positive feelings about the program and were given accurate information, it would serve to transmit a positive climate to the entire sutdent body.

Parents

It was felt that obtaining parental approval was necessary before starting the Peer-Peer Program. It would be difficult to promote positive attitudes towards the disabled in the children if their parents were opposed to the implementation of the program. It was necessary to educate the parents so they would understand the goals of the program.

A parent meeting was held in the Center Street School. The principals of Center Street School and Human Resources School were present, as well as the health coordinator of the Herrick's School District and the teachers involved in the program. The meeting was well attended with the majority of parents being present.

The Center Street principal ran the meeting and explained the purpose of the program. He stated that he felt that the Peer-Peer Program was a valuable educational experience in that understanding the handicapped was an important aspect of health education. He clearly stated that unless the parents agreed with the aims of the program, the program would not be implemented.

The principal of Human Resources School then spoke stating that the program would not only benefit the nondisabled youngsters, but also the students from Human Resources School. He felt that the program would be a valuable experience for the handicapped in dealing with their peers in the community. A film was then presented which showed the program at Human Resources School.

The parent's reaction was extremely positive and enthusiastic. They admired the architectural beauty of Human Resources School and the resourcefulness of the children. The parents were less apprehensive. They now had a more accurate understanding of the types of disabled children involved, the activities, and the goals of the Peer-Peer Program.

Students

[Nondisabled]

It was felt that the first exposure of the nondisabled youngsters to their disabled counterparts was an important step in the program. It was also important that the number of social demands made of both groups of children be kept at a minimum so that no child would feel unduly threatened by the experience. The first exposure was seen as a desensitization period in which the nondisabled children could gradually become accustomed to the physical appearance of the handicapped children with their wheelchairs, crutches, braces, and prosthetic devices. It was also important that this meeting would enable the nondisabled group to view the disabled group as children rather than as objects, children who had personalities, talents and were capable of smiling and laughing as they were.

The children from Center Street School were therefore invited to a dress rehearsal of the yearly Christmas Show at Human Resources School. The day before the visit; their teacher made a short statement such as, "Tomorrow we will visit the Human Resources School to see a group of children present a Christmas show. All the children at the school are crippled or have some type of physical handicap."

An initial reaction to facing any new, unknown situation is fear. This situation was no different. As the children entered the school building, the whispers and stares were apparent. Both groups of children admitted their apprehensions and anxiety of the new situation and the children they were to see. The Christmas play proved to be a successful experience. The nondisabled children eagerly and curiously watched the acting and singing of their disabled peers. The afternoon ended with admiration for and a reduction of fear toward the disabled children. Although apprehension and suspicion about their new group of peers still remained, the interest and anticipation of another meeting was motivated.

Nondisabled student's reaction to the experience

Teacher: How did you enjoy the afternoon?

Child: It was great, did you see how fast they got around in their wheelchairs?

Teacher: Yes, their wheelchairs are almost like a part of their bodies.

Child: What was wrong with Kojak? Why does he have a wheelchair?

Teacher: I'm not sure. Why don't we wait and ask him when we meet him.

Child: You know, I was really afraid of what the children were going to look like or what to say to them if they came over to me.

Teacher: Don't you feel that way when you are going to meet a new relative whom you have never met before?

Child: Sort of.

Child: You know, after awhile I was just looking at the boy who was playing Kojak on stage and I didn't even notice the wheelchair!

[Disabled]

The children chosen from Human Resources School were told that they were going to be in a special program with a group of children from the neighboring elementary school. It was felt that the children would feel most confident if they were asked to talk about and show a thing that they knew well, their school. A tour would provide a very structured interactive experience in which the children knew what was expected of them.

Each child would serve as a tour guide. They would take a small group of children from Center Street School through Human Resources School, explaining the various areas and programs. A teacher was to be included in each group as an observer, and to deal with any difficult situations which may have come up. Being a member of a small group would help reduce the feeling of the handicapped child that he was on display. A small group atmosphere could also encourage the interaction among the children. The tour included the following activities:

1. Report to the Discovery Center (Open Classroom) to make name tags for each child.

2. A sample itinerary included: cafeteria, art room, Little Theatre, library, home economics room, science room greenhouse, elementary and high school wings, main office, pool, drivers' education area, planetarium show, visit to Dr. Viscardi (President of Human Resources Center), medical wing (dentist, nurse, physical therapist, psychologist).

Disabled student's reaction to the experience

Child: Did I do O.K. on the tour?

Teacher: Yes, you did great.

Child: But I didn't seem friendly. I am friendly but I am shy. I didn't talk too much to them.

Teacher: Did you talk right away to Robert (new boy in child's class, who is a good friend now)?

Child: No.

Teacher: It took time to get to know him. We'll be going to Center Street next Wednesday and you can make the effort to talk to the same kids again.

Nondisabled and Disabled

The third introductory meeting was held at the Center Street School. Concern was shown on the part of the principal in providing for the comfort and safety of the disabled children. Questions such as "Should we move the classroom to the front entrance?" or "Should we take some of the furniture out of the room" were asked. Reassurance was given that everything should remain exactly the same, since no architectural barriers really existed. The school was built on one level, and most of the doorways were wide enough for a wheelchair to go through.

When the children arrived in the morning, they were brought to the classroom. Curious stares of informed, yet apprehensive children were evident in the hallways. The principal had made an announcement the previous day informing the school of the visit.

The morning included a tour of the Center Street School. The entire class was once again divided into small groups, this time with the nondisabled children being the tour leaders. The tour included:

> A visit to the classroom, library, music room, gym, primary resource room, intermediate resource room, principal's office (with introduction to the principal), nurse's office, speech room, psychologist, art room, reading room, and cafeteria.

After the tour, all the children reported back to the classroom. They had been asked the day before to write a short paragraph describing themselves. They were told that the teacher was going to read the paragraph and tell which tour group the child was in, but that the students had to guess the mystery youngster. A typical paragraph from a disabled child was as follows:

> I have brown hair,
> blue eyes,
> light skin.
> I look big for my age,
> And I am overweight.
> Who Am I?

A paragraph from one of the nondisabled youngsters was as follows:

> Well — I have dirty blonde hair.
> I will have to get braces.
> I have bangs
> My eyes are blueish-gray.
> I usually wear my hair in clips.
> Guess who?

The paragraphs helped indicate that all the children saw themselves as being different from each other. Yet, on the basis of the paragraph, it was usually impossible to tell whether or not the child was disabled. In the above paragraph of the nondisabled girl, her self-identification included needing braces for her teeth. This information could help disabled children discover that all children have some type of physical imperfection.

After the "Guess Who Game" the children were allowed to have an informal lunch period. The children were interspersed around the room, with most attempting idle chatter. Linda, a girl in a wheelchair, however, had a small group of three girls surrounding her looking at her family photo album. On the other side of the room was Andy, playing checkers on the floor with Eric, his new "friend" from Center Street School.

"RAP" SESSION

An important aspect of the Peer-Peer Interaction Program is to receive feedback from the children involved. The sessions usually include only the disabled or nondisabled children. If the children feel comfortable in expressing their feelings, then fears, anger, frustration, feelings of rejection and acceptance can be dealt with. The need to accept oneself and cope with individual differences is an important aspect of the growth process. Tolerating limitations and capitalizing on strengths is a characteristic of the healthy personality. Rap sessions can give us feedback as to the strengths and weaknesses in the Peer-Peer Program, helping the staff judge the success or failure of any of the stages. It can also help acquaint us with any special problems that any of the individual children were experiencing in interacting with their groups. A child with low self-esteem who saw the program as a way of expressing angry feelings toward another child, who was viewed as being more vulnerable, could be helped. A child who felt threatened by the experience and withdrew from the group could receive emotional support. The reaction of handicapped youngsters to their interaction with nondisabled youngsters was the topic of the following sessions:

Child: Amy kept on pushing my wheelchair. She never lets me do anything on my own.

Teacher: Why do you think she does these things for you?

Child: She probably thinks that I am helpless!

Child: Some people think that because we can't walk, it means that we can't do anything.

Teacher: How do you think Amy feels when she helps you?

Child: She probably thinks that she is being nice to me.

Child: Yea, that is the way some people act to me to try and show that they are friendly.

Teacher: How can we show Amy that we enjoy her friendship, yet we feel angry when she tries to do everything for us?

Child: I could tell her I feel angry when she gets my coat or pushes my chair.

Child: No, if you tell her that you are angry, then she might feel insulted.

Child: How about saying something like, "Thanks Amy, but I think I can get my coat myself, or pushing my wheelchair helps me keep my muscles strong."

Teacher: What the group seems to be saying is that we have to tell people what we can or cannot do in a polite way, since most people are just trying to be friendly when they help.

Curriculum Area

A Peer-Peer Interchange Program utilizing a health education curriculum was proposed. It was felt that health education provided a broad enough range of topics to accomplish the goals of the program.

The health education curriculum stresses good mental health. The expression of feelings, the establishment of friendships, and the formation of positive attitudes towards disabled persons are all encompassed. The subject matter provides a medium for the expression of information and feelings in a peer-peer integration process.

Health activities can be used to stress similarities among the two groups of students; the need for physical fitness, the importance of proper nutrition, similar feelings in identical situations. These areas of health indicate that all people share common concerns and physical needs.

Health education is an area which can provide a wide range of topics and projects which could be individualized to fit the talents and needs of each child. Art projects would depict man's reliance on his environment. Through creative writing and puppetry, the feelings of friendship and self-image unfold. The ability to measure, mix, and cook ingredients in a nutrition group stresses cooperation towards a common goal. The use of skills in swimming or throwing a basketball from a standing position or a wheelchair, demonstrates the common abilities of children.

Information about the human body and physical disabilities are included in the program. It is common for a child to look at a disabled friend and earnestly want to question, "What is wrong with you? Why are you crippled"? A Health Education Program allows the free give and take of questions and answers concerning the body and disabilities in the group. Questions, such as the above, can be appropriately asked without singling out and embarrassing a child. Such questions can be encouraged and handled directly. Here the student as well as the teacher can act as an expert and provide valuable personal information about a disability. This may be one of the first opportunities of disabled children to talk to others about their disability, rather than to be talked about.

CURRICULUM ACTIVITIES

Nutrition Group

The program for the nutrition group emphasized that all children must rely on proper diet to stay healthy. Activities, therefore, were not only centered on research in the Human Resouces School library of vitamins, minerals, and diet planning, but also on the preparation and cooking of nutritious foods. Since all the cooking activities required the preparation of several ingredients, many children could be included in the team project. Each child could be given a chore which would fit his or her capabilities with the final product consisting of the group effort.

The homemaking room at Human Resources School was utilized, since it is specially equipped for the use of people confined to a wheelchair. Counters are low and hollow underneath allowing free access from a wheelchair. The sink, the stove, and oven are at the proper height so that a person in a wheelchair is able to reach. A mirror hangs over the stove to allow a clear view of the inside of the pots and pans. A regular kitchen is also included in the homemaking room to allow practice in the type of kitchen commonly found in most homes and apartments.

The following are activities which a nutrition group could use:

1. Make a chart of the digestive system.
2. Chart the four basic food groups.
3. Chart various vitamins and minerals and principal food sources.
4. Interview the school dietitian concerning menu planning.
5. Make drawings of the various methods to store foods.
6. Use puppetry to indicate the shortage of food in other countries.
7. Collect recipes of health dishes.
8. Acquaint children with different areas and appliances in the kitchen.
9. Explain the use of different utensils in the kitchen.
10. Teach the use of teaspoon, tablespoon, and cup measures.
11. Allow the children to practice peeling, cutting, and chopping fresh vegetables.
12. Teach children how to measure and mix ingredients to make a cheese sauce.
13. Teach children how to simmer, fry, and boil on the stove.

14. Stress safety in the kitchen through the use of cartoons.
15. Teach how to add calories of individual ingredients to determine total calorie count of recipe.
16. Prepare the recipes for "Parent Night".
17. Compile a recipe book for "Parent Night".
18. Allow the children to wash and dry the dishes.

Special Considerations

1. Children with hemophilia (inability to clot blood) should not be allowed to use sharp instruments, such as knives or peelers, unless they are under a teacher's close supervision. Safety measures, such as keeping hands and fingers away from sharp objects, must be stressed.

2. Children with dysautonomia should be supervised by the stove area, since their skin is insensitive to heat and cold and they could, therefore, easily burn themselves.

3. Children with muscular dystrophy should not be given activities which involve the lifting of heavy utensils. Consideration should be given to the amount of reaching needed for a task, since these children have weakness in the extremities.

4. Children in wheelchairs should be taught to use the mirrors which are placed above the stove in the homemaking room. These prevent the children from being burned while looking over hot pots and pans while stirring food.

5. Children with weight problems should be counseled as to their caloric intake during a typical day.

Mental Health Group

The mental health, or "friendship group", as it was called, was designed to help the children explore individual differences in people which might make them unique, while stressing basic similarities of all. The goal of the committee was to demonstrate that although we have physical differences, emotionally we share similarities. A conclusion which it was hoped that the committee would reach is that each one of us has a great deal to offer ourselves and others.

Activities centered around allowing the children to explore the way they perceived themselves physically. Each child demonstrated good and bad points about his or her physical appearance. Next, they explored the way they felt about some given situations, discovering that their reactions were quite similar, even though they all look different. Each child spoke about his interests and hobbies, likes and dislikes. The attention and questions by the other group members demonstrated that each of them had something to offer. Finally, they explored games and activities which the children enjoyed doing as a group.

The expression of the feelings and thoughts of the friendship groups were through the means of puppetry, drawings, rap sessions, and a group project – a slide film. The children were responsible for writing, casting, acting, and narrating the film.

Activities which could be used by a friendship committee were as follows:

1. Fingerprint all the group members to show we are all different.
2. Make a list of good and bad points of being tall, skinny, sloppy, and disabled.
3. Through the use of puppetry have the children demonstrate the way they think other people see them physically.
4. Have committee members fill out a questionnaire which contains, where born, favorite subject, food I hate the most, favorite game, what I want to be when I grow up.
5. Each member make a diarama which describes one aspect of the above questionnaire.
6. Play telephone game (each person relays a message to next child) to indicate how the group relies on each individual.
7. List activities which each child enjoys doing with other children.
8. Discuss different types of friendships, we have, i.e., parent, teacher, playmate, spelling buddy, workmate, teammate, etc.
9. Ask each child to pick a physical type and write a short skit for film. Costume and scenery also to be included.
10. Ask each child to write a skit for the film about himself, with suitable costume and scenery, to demonstrate his interest or hobbies.
11. Find activities in Human Resources or Center Street schools which illustrate a child doing something for another child, or helping a group.
12. Have children narrate their parts on tape.
13. Film the scenes of the movies.

Physical Fitness Group

A primary goal of the gym group was to demonstrate that all children can be healthier and improve their physical status through sports and exercise. The emphasis was not placed on competition, or on comparing individual children with each other. Rather, improvement was stressed, being more fit today than you were yesterday. Students, disabled or nondisabled, could chart their progress in different areas and note self-improvement. Safety measures were stressed. Once again, safety is an area which is important for the well-being of any child, with the general principles of safety being the same for disabled and nondisabled. Time was spent discussing and participating in team activities. The group was given the chore of evaluating how a team activity could be modified to allow children in wheelchairs to participate. Areas such as baseball, hockey, basketball, and an obstacle course were discussed.

The accomplishments of the gym committee included giving each child a healthy respect for his physical progress in an individualized physical fitness program. Children were also made aware of the hazards involved in the different activities and safety precautions to prevent accidents. Thirdly, the children had a further understanding of how modifications could be made in team activities to include other children.

Activities for a physical fitness group could include:

1. Make a list of different types of exercises for different parts of the body (with help of physical therapist).
2. Have each child make his or her own progress chart which would include the area of the body to be improved, type of exercise, initial ability to perform the exercise, and practice days.
3. Small groups could work on a sports display. They pick a sport and then make a small model of it (diorama) to indicate how children with or without wheelchair can participate.
4. Make a collage of sport articles from the newspaper.
5. List safety rules of different activities using the collage made in the previous activity as a backdrop.
6. Allow all the children to shoot baskets from a wheelchair.
7. Allow all the children to hit hockey goals from wheelchair.
8. Have the children design an obstacle course which could be used with and without a wheelchair.
9. Discuss nutrition connected with sport activities.
10. Discuss and demonstrate proper use of equipment in the gymnasium.
11. Practice exercises picked in chart.

Special Considerations

1. All fitness exercises for disabled children should be discussed with the school physical therapist to determine if muscles should be exercised and what types of exercises are best.

2. Children with muscular dystrophy may need passive exercises (another child or teacher helps child move arm or leg) because of their muscle weakness in the extremities.

3. Children with cardiac problems should be taught to pace themselves and rest when signs of fatigue are apparent, i.e., blue lips and fingertips, flushed face, dizziness or nausea.

4. Children with osteogenesis imperfecta should be aware of safety hazards of physical activities because of their tendency to have bone fractures.

5. Children with dysautonomia should pace themselves and not become overfatigued because of their respiratory and blood pressure difficulties.

6. Hemophiliacs should be careful not to be bruised or cut.

Swimming Group

In the water, where resistance is low and buoyancy is present, the disabled child can perform wide range of movement with his arms and legs which he is not capable of performing outside of the water. Swimming is an activity which improves muscle tone, increases the use of the respiratory system, and stimulates vascular circulation. Although this type of exercise is especially important for disabled people, all people benefit in terms of physical fitness. In the pool, all the children had similar physical abilities. The ability of each child was not a measure of whether or not he was disabled, but rather an individual difference of acquired skills in swimming. Activities were planned on an individualized basis allowing each child to master new skills.

Interaction was fostered by the establishment of a buddy system. Water safety was constantly reinforced with the entire group practicing water safety rules, as well as safety procedures during an emergency situation. Team cooperativeness was established through water games, such as relay races, water basketball, water volleyball, and underwater bobbing for objects. It was hoped that each child would have a healthy respect for his or her abilities and limitations and for the abilities and limitations of other group members.

Activities which could be used with a swimming group include:

1. Establish the ability of each swimmer.
2. Teach primary skills, i.e., breathing, kicking, and strokes.
3. Formulate safety rules in the pool and pool area (no running, jumping, fighting, etc.)
4. Formulate safety procedures in emergency situations.
5. Establish buddy system.
6. Discuss physical benefits for each child with swimming activities.
7. Teach deep water survival techniques.
8. Introduce bobbing for objects as a new skill.
9. Explain the use of underwater gear (mask, fin, and snorkel).
10. Allow each child to demonstrate the procedures to be used in an emergency situation.
11. Make a chart which indicates each child's progress in water skills.
12. Explain the rules and participate in water basketball, volleyball, and relay races.

Planetarium Group

Human Resources School has a full-scale planetarium on its' grounds. The planetarium is an integral part of the science and mathematics curriculum. It was felt that because man depends so greatly on his environment and his ecological surroundings, that a group of children should be involved in activities which related ecology as being one aspect of health. The goals of this group emphasized that (1) We are all dependent upon our environment. (2) Pollution and destruction of our natural resources is harmful to man. (3) All children in the group could contribute to a study of the celestial bodies. Activities in the planetarium group usually did not involve physical abilities. The fact that a disabled child could be as intelligent as his nondisabled peer was a revelation for some of the children who thought that "disabled people are retarded."

The following are samples of activities used by the planetarium group:

1. Point to the general direction of the rising of the sun, moon, and stars, and identify that direction as East.
2. Point to the direction of the setting of the sun, moon, and stars and identify that direction as West.
3. Point out the constellation Ursa Major and use the pointer stars to find Polaris.
4. Point to the star that does not move, Polaris, and identify that general direction as North.
5. Point to the direction of the maximum altitude of the sun and moon and identify that direction as South.
6. Point to the general direction of North, East, South, or West when given the identity of the direction that is opposite.
7. Complete crossword puzzle using astronomy vocabulary.
8. Learn how to read star maps.
9. Learn how to find specific constellations and stars by reading star maps.
10. Learn how to find specific stars, constellations by using the celestial meridian, celestial equator, and the ecliptic.
11. Draw charts of seasonal constellations.
12. Learn how to operate planetarium consoie and system for correct day, year, and season with correct latitude.
13. Write script and perform star show for parents.

PSYCHOMETRIC MEASURES

Attitude Measures

One criterion for the evaluation of the Peer-Peer Interaction Program is an objective measure of the amount of positive change in attitudes towards disabled children. Such a measure would indirectly indicate the quality and degree of interaction which actually took place among the youngsters.

An attitude scale was administered at the beginning and at the completion of the Peer-Peer Interaction Program to both the nondisabled and disabled youngsters in an attempt to measure any shift of attitudes.

Attitude Towards Disabled Person Scale

The Attitude Towards Disabled Person Scale (ATDP) was developed at Human Resources Center by Yuker, Block, and Younng (1960, 1970). The scale was developed as a reliable and valid instrument to measure attitudes toward disabled persons. The scale attempts to measure attitudes towards all disabled persons rather than toward those with some specific disability, such as blindness, deafness, amputation, etc. The scale can serve the dual purpose of measuring the amount of prejudice of nondisabled persons, as well as the attitudes of disabled persons toward themselves and toward being disabled.

There are three forms of the scale. Form 0, the original scale consists of 20 items, statements describing disabled persons; forms A and B each contain 30 items. Items were used to form a Likert-type scale in which the respondent is asked his reaction to a statement concerning disabled persons in terms of agreeing very much (+3) to disagreeing very much (−3). The subject is forced to make either a positive or negative decision since there is no neutral point (0) on the scale. The scores on forms A and B can range from 0 to 180, with a high score reflecting positive attitudes. A high score also represents little difference in the way the subject views a disabled person compared to a nondisabled; a low score represents many differences, with the differences representing a negative connotation.

Attitude Towards Disabled Persons–Revised for Children

Since the ATDP was designed for use with an adult population, it was found by the investigator to be extremely difficult to administer the standard form of the scale to a sample of elementary school children. It was found by pilot testing that the vocabulary and six point scale (+3 to –3) were confusing to young children.

Forms A and B were therefore modified so that elementary school children could be given the scale. The first modification was in terms of vocabulary. Each statement contained on the scale was rewritten to convey the same meaning with a simpler vocabulary. This allowed children with approximately a fourth grade reading level to read and comprehend the statements independently.

The second change involved the modification of the words "physically disabled." It was found that many of the nondisabled children had an unclear understanding of what the word implied. However, most of the children had a firm, concrete understanding of the term "crippled." Although "crippled" may not adequately describe all groups of disabilities, and many people in the field of rehabilitation feel that the word "crippled" has negative connotations, it was felt that this term was the most satisfactory for the use of elementary school children. Therefore, statements were changed to state "crippled children," rather than "physically disabled children."

The third modification was in terms of making each statement meaningful to the experiences of elementary school children. For example, a statement on the original form A was "Disabled people should not have to compete for jobs with physically normal people." This statement was modified on the children's version to "Crippled children should not have to compete in school against those children who are not crippled." By making the statements better fit the life experiences of young children, the investigator felt that a truer measure of attitudes could be obtained.

The final change was in the use of a two-point scale instead of the original six-point scale. Each statement was followed by the words "true" or "false," with the child requested to circle one or the other.

A panel of judges was asked to compare the statements of the original version with the revised version to judge whether they conveyed the same intent in meaning. Statements were retained only when all judges unanimously agreed to the equality of the two statements. However, the author acknowledges that although the new version appears to have face validity, further field testing is needed to determine the reliability coefficient between the ADTP and the ADTC. Therefore, the present version is intended for research purposes only.

Structured Questionnaires

Another means of evaluating the Peer-Peer Interaction Program was to ask the children involved, and their parents, direct questions concerning their feelings toward the program. This questionnaire was administered at the completion of the school year.

Children's Questionnaire

The Child Evaluation Form (CEF) was composed of five basic questions. First, the child was asked if he enjoyed the Peer-Peer Program, and why. Secondly, an attempt was made to determine the quality of interaction by asking the name of the child they would like to stay friendly with. Thirdly, the children were asked the names of the activities which the disabled children participated in which surprised them. Fourth, the children were asked if they would like to continue with the Peer-Peer Program and why; and last, the children were asked to list any new activities which they would like to see included in the future.

Parent Questionnaire

An attempt was made at determining parents' reaction to the Peer-Peer Program and the effects which the parents thought that the program may have had on their children, and on themselves. Parents were therefore asked, (1) to list any positive or negative comments received from their child concerning the program; (2) to what extent did they feel that their child benefitted from the program; (3) whether the Peer-Peer Program affected their attitudes towards disabled people; and (4) whether they would like to see their child continue with the Peer-Peer Program.

RESULTS AND DISCUSSION

In the present project, a group of physically disabled children were given the opportunity to interact in small group projects with nondisabled peers. These interactions took place during a four month period with approximately two meetings per month.

Form A of the Attitude Towards Disabled Persons Scale–Revised for Children (ATDC) was given at the start of the program to the nondisabled and disabled children. Form B, a parallel form of the test, was administered at the completion of the program. Form A, and later Form B, were also given to a group of disabled and nondisabled children who did not participate in the program, but served as controls. Table 1 represents the mean scores and standard deviations of each of the groups on both forms of the ATDC.

Table 1

Means and Standard Deviation on the ATDC
for Nondisabled and Disabled Children
Before and After the Peer-Peer Program

		Before Program	After Program
		ATDC (Form A)	ATDC (Form B)
Experimental Group			
Nondisabled N = 30		121.0	131.00
	s.d.	17.44	s.d. 18.93
Disabled N = 12		139.50	141.75
	s.d.	16.86	8.93
Control Group			
Nondisabled N = 25		107.88	105.24
	s.d.	24.30	30.34
Disabled N = 14		122.57	121.21
	s.d.	27.93	s.d. 25.81

Table 2 represents a comparison of the scores on Form A of the ATDC for the groups before the Peer-Peer Program.

Table 2

Differences of Attitude Scores on the ATDC
Between Groups before the Peer-Peer Program

Comparison	t	Probability Level
Experimental Group		
Disabled vs Nondisabled	2.18	.05
Control Group		
Disabled vs Nondisabled	1.60	n.s.
Disabled S_S		
Control vs Experimental	1.79	n.s.
Nondisabled S_S		
Control vs Experimental	2.34	.05

As reflected in Table 1 on pretesting, the disabled youngsters appear to have more positive attitudes on the ATDC than their nondisabled peers. While Table 2 indicates that this difference was significant for the experimental group, ($t = 2.18$) it only approached significance for the control group ($t = 1.60$). Similar results were indicated by Yuker, Block, and Younng (1970) who found that disabled adults scored significantly higher than disabled S_S on the ATDP.

Table 2 also indicates that on pretesting, there was a significant difference between the scores of the nondisabled youngsters of the experimental and control groups. This result may be explained by the fact that the nondisabled children in the experimental group were given the ATDC after an initial visit to Human Resources School. The children, at the time of the visit came to see the rehearsal of the Christmas play. Although no true interaction took place at that time, the children were exposed to a positive situation involving disabled children which may have resulted in the higher pretest score. The fact that the parents of the children involved in the Peer-Peer Program were invited to a parent meeting to discuss the program before its implementation could have also served to sensitize the children's attitudes towards the disabled resulting in higher pretest scores than the control group.

Each child received a difference score which was composed of the difference between his scores on Forms A and B of the ATDC. Mean difference scores were computed for each group, as well as standard deviations, to determine the amount of attitude change. It was assumed that

disabled and nondisabled children in the control group would show little or no attitude change on the two forms of the test. It was predicted that children involved in the Peer-Peer Program would demonstrate a positive shift of attitudes towards the disabled. Table 3 indicates the mean difference scores of the experimental group, and a comparison to determine the significance of attitude change compared to the control group.

Table 3

Comparison of Mean Difference Scores
and S.D. on ATDC
Before and After the Peer-Peer Program

	Control Group (No Peer-Peer) Program		Experimental Group (Peer-Peer) Program		t	Prob.
Disabled	-1.36 s.d. 17.82		2.25 s.d. 13.59		.56	n.s.
Nondisabled	-2.64 s.d. 19.88		10.1 s.d. 18.52		2.42	.01

The results on Table 3 clearly indicate that the nondisabled children involved in the Peer-Peer Program showed a significant positive shift in attitudes when compared to the control group. Although the disabled children involved in the program did show a positive shift in attitudes, this shift was not great enough to be considered significant when compared to the control group. It should be pointed out that the disabled children in the Peer-Peer Program appeared to have very positive attitudes as measured by the ATDC before the program was implemented. It would have been difficult for these children to show a significant change, since their scores were reaching the high end of the attitude scale at the time of pretest.

In the present project, attitudes as measured by the ATDC indicated the following:

1. Disabled children who were included in the Peer-Peer Program showed a singnificantly higher attitude score, reflecting more positive attitudes towards the disabled, than did nondisabled children before the implementation of the Peer-Peer Interaction Program. Disabled children in the control group also showed more positive attitudes than the nondisabled children, however, this difference was not significant at the .05 level.

2. Nondisabled children involved in the Peer-Peer Program, on pretesting, showed significantly higher attitude scores before the implementation of the program than the nondisabled children in the control group. Indirect involvement of these children and their parents in the program before formalized testing is the possible reason for this difference in attitude scores.

3. Nondisabled children involved in the Peer-Peer Program showed a significant positive shift in attitudes when compared to a control group.

4. Disabled children involved in the Peer-Peer Interaction Program showed a nonsignificant change in attitude when compared to a control group.

Structured Questionnaire

Child Evaluation Form

The result of the Child Evaluation Form are represented in Table 4. The questionnaire contains several open-ended questions which give the investigator some personal reactions to the program. An attempt was made to quantify the results so that certain comparisons could be made. Table 4 reflects these comparisons.

Table 4

Child Evaluation Form

	Nondisabled			Disabled		
	Yes	Undecided	No	Yes	Undecided	No
Did you enjoy the Peer-Peer Program?	100%				81%	19%
Do you wish to remain friendly with a child you met in the program?	90%		10%	55%		45%
Do you wish to continue in the Peer-Peer Program next year?	100%			72%	09%	19%

Table 4 indicates that all the nondisabled children responded that they enjoyed the Peer-Peer Interaction Program and wanted to continue with the program next year. Ninety percent of the nondisabled children felt that they wanted to remain friends with a child they met in the program. The results for the disabled children appear strikingly different. Eighty-one percent of the disabled children responded that they were undecided as to whether they enjoyed the program. An analysis of the data revealed that all the children in the undecided column responded that they enjoyed the program and the activites, as well as the chance to be with nondisabled children, however, they felt that the nondisabled children selected were much too young for them. The disabled children felt that they would have rather have been with children of their own grade. It therefore appears that the attempt to equate the two groups in terms of social maturity by using a younger nondisabled class may have, in fact discouraged the interaction of the disabled children. The nondisabled children, on the other hand, did not seem to mind and may have been complimented by the fact that they were paired with an older group of children. It is interesting to note that over half of the disabled group gave the name of a child with whom they felt they would like to remain friends. It appears that although they were opposed to being paired with a younger group of children, half the children nonetheless felt they had enough in common with a friend from the nondisabled group. Almost three quarters of the disabled group wished to continue with the program next year, with many of the children stating "with my own grade of friends from the other school."

Parent Evaluation Form

Table 5 represents the responses of the parent evaluation form. Responses were received from twenty parents of nondisabled children involved in the Peer-Peer Program.

Table 5

Parent Evaluation Form

Nondisabled Children

	Yes	No
Did your child enjoy the Peer-Peer Program?	100%	
Would you like your child to continue in the Peer-Peer Program next year?	95%	5%
Was your attitude towards disabled people changed by your child's involvement in the Peer-Peer Program?	55%	45%

Table 5 indicates that all the parents thought that their child enjoyed the Peer-Peer Program and 95% of the parents wanted their children to continue. Although the Peer-Peer Program did not extensively involve the parents, at least half of them responded that they thought the program did affect their attitudes towards the disabled.

The investigator feels that in some ways the quantitative data does not reflect the degree of enthusiasm conveyed by the parents in evaluating the program. To get a flavor of the type of comments made by the parents a sample response is included:

> At first she was afraid that the children's illnesses might be contagious. After a few visits she was in awe of the wonderful facilities. Then the overall impression seemed to ignore the fact that the other children were handicapped and it just became a sharing situation.
>
> She is not uncomfortable among handicapped people. She has learned that each child is special and can reach his potential.

The parent of a disabled child commented:

> Since Susan may have to mainstream next year if we relocate to Washington, D.C., the experience of visiting a regular public school and meeting the students there has been a very important experience.
>
> She has made friends with several of the girls in the class. Four of the girls came to our home for Susan's birthday party. All had a wonderful time. We have plans to visit during the summer. Since there are no children Susan's age in our neighborhood, this has been a wonderful experience.

CONCLUSIONS AND RECOMMENDATIONS

Observation and evaluation of the data of the Peer-Peer Interaction Program appears to confirm the success of the original goals of the project. Children, parents, and faculty members have all profited from the program. The investigator would like to restate the original goals of the program and evaluate how the program has met these goals.

Help reeducate the community to the abilities, as well as realistic limitations of disabled people.

It is felt that the small group activities were an excellent means of acquainting the children with the talents and limitations of the disabled. Many of the nondisabled children were impressed by the way that disabled children were able to move quickly in their wheelchairs, swim, play basketball, baseball, and learn like themselves. The parent's were equally impressed as a result of the activities during the "parent night".

Help develop positive social attitudes towards the disabled.

The results of the ATDC clearly indicated that the nondisabled children in the Peer-Peer Interaction Program had significantly more positive attitudes towards the disabled than children who were not included in the program. This means that the children in the program began to see disabled children as being less different and more like themselves. Although no formalized testing was undertaken with the parents, approximately half stated that their attitudes had been affected by their children being part of the program. Future research is needed to evaluate means of increasing parents' acceptance of the disabled, as well as the effect which it has on the children's attitudes.

Provide a rewarding experience for disabled youngsters, thus encouraging further contact with other nondisabled people.

The Peer-Peer Interaction Program seems to have been a rewarding experience for many of the disabled children. The children's objection to being paired with a group which was two grades younger was a valid complaint which should be rectified in future programs. However, since half the children felt that they wanted to continue to be friends with a nondisabled child they met, and three quarters of the disabled children felt that they wanted to continue to be part of the Peer-Peer Program, the evidence seems to indicate that they felt that the activities and the contact with nondisabled children were rewarding and satisfying.

Develop cooperative projects which will utilize the skills and talents of each child, disabled and nondisabled.

It is felt that the activities of the friendship, nutrition, planetarium, physical fitness, and swimming committee adequately served as a model to demonstrate that a wide range of activities can be modified to meet the needs of all youngsters. The aim of the program in allowing each child to use his skills were met in observing *all the children* actively engaged in completing their projects. Many of the parents of the nondisabled children commented on the ease with which their children worked and played with children who were in wheelchairs.

Provide a mechanism by which disabled children will feel a part of the larger community setting.

For a disabled person to feel that he is a part of the community is in many ways determined by his acceptance of the community members. The unanimous findings that the nondisabled children enjoyed the program, desired to remain friendly with a "disabled friend", and wanted to continue with the Peer-Peer Program was a measure of the high degree of acceptance of these children of the disabled child. The increased scores on the ATDP has another

objective measure of the acceptance of disabled children by their nondisabled peers. The receptive attitudes of the parent's to the further inclusion of their children in the Peer-Peer Program is further indication of the disabled child's acceptance in the community setting.

The Peer-Peer Program is an example of how the lives of severely disabled youngsters, as well as nondisabled youngsters can be enriched by their joint interaction. In a program such as this, the disabled child still maintains the specialized facilities and services which he needs to grow and develop. However, he no longer has to feel that he is completely "special" or "different". Through the dual efforts of meeting his specialized physical and educational needs, he can be provided with an experience which will help develop his social needs.

A program such as the Peer-Peer admittedly takes much planning and innovation. Developing activities, orientating administrators, teachers, parents, and children are all important steps in the success of such a program. On the other hand, success tends to be habit forming. Once the solid foundations of a program such as this are laid, accomplishments and further expansions are limitless.

REFERENCES

Centers, L., & Centers, R. Peer group attitudes towards the amputee child. The Journal of Social Psychology, 1963, 61, 127-131.

Force, D. G. Social status of physically handicapped children. Exceptional Children, 1956, 23, 104-107.

Nyquist, E. B., Mainstreaming: idea and actuality, State Education Department, Albany, 1974.

State Education Department, The Education of Children with Handicapping Conditions, Albany, November, 1973, p. 6.

Tennessee Laws, Sec. 2B, ch. 839, 1972.

Yuker, H. E., Block, J. R., & Campbell, W. J. A Scale to measure attitudes towards disabled persons. Human Resources Study Number 5, Albertson, N.Y., Human Resources, 1960.

Yuker, H. E., Block, J. R., Younng, J. H. The Measurement of Attitudes Toward Disabled Persons, Rehabilitation Series 3, Albertson, N.Y., Human Resources, 1970.

Form A
5/13/75

ATDP – REVISED FOR CHILDREN

Ronald S. Friedman, Ph.D.

Research Edition

Read each sentence and circle the word to show whether you feel each statement is True or False. Remember, this is to see the way you feel. There are no right or wrong answers.

1.	Crippled children are usually not friendly.	true	false
2.	Crippled children should not have to compete in school against those children who are not crippled.	true	false
3.	Crippled children get upset more easily than children who are not crippled.	true	false
4.	Most crippled children are more worried about what people think of them than children who are not crippled.	true	false
5.	We should expect just as much from crippled as from children who are not crippled.	true	false
6.	Crippled children are not as good students as children who are not crippled.	true	false
7.	Crippled children do not usually help their communities very much.	true	false
8.	Most people who are not crippled would not want to marry anyone who is crippled.	true	false
9.	Crippled children get as excited about things as other children.	true	false
10.	Crippled children have their feelings hurt more easily than other children.	true	false
11.	Very crippled children are usually messy.	true	false
12.	Most crippled children feel that they are as good as other children.	true	false
13.	The driving test given to a crippled teenager should be harder than the one given to a teenager who is not crippled.	true	false
14.	Crippled children are usually friendly.	true	false
15.	Crippled children usually don't worry about getting their work done as much as children who are not crippled.	true	false

Adapted from the Attitude Toward Disabled Person Scale, (Yuker, H. E., Block, J. R., & Younng, J. H., 1970)

16. Very crippled children probably worry more about getting sick than less crippled children. true false

17. Most crippled children are not unhappy with themselves. true false

18. There are more strange children who are crippled than not crippled. true false

19. Most crippled children do not give up easily. true false

20. Most crippled children are jealous of physically normal children. true false

21. Crippled children should compete with physically normal children. true false

22. Most crippled children can take care of themselves. true false

23. The best thing would be if crippled children would live and go to school with children who are not crippled. true false

24. Most crippled children try just as hard as children who are not crippled. true false

25. Crippled children feel as good and as important as other children. true false

26. Most crippled persons want more love and praise than other people. true false

27. Crippled children are often not as smart as children who are not crippled. true false

28. Most crippled children are different from children who are not crippled. true false

29. Crippled children don't want you to feel any more pity for them than for other children who are not crippled. true false

30. The way crippled people behave is annoying. true false

Form B
6/5/75

ATDP – REVISED FOR CHILDREN

Ronald S. Friedman, Ph.D.

Research Edition

Read each sentence and circle the word to show whether you feel each statement is True or False. Remember, this is to see the way you feel. There are no right or wrong answers.

1.	Crippled children are usually friendly.	true	false
2.	Children who are crippled should not have to pay for class trips.	true	false
3.	Crippled children do not show their feelings as much as children who are not crippled.	true	false
4.	Crippled children can play the same games as children who are not crippled.	true	false
5.	Most crippled children get angry easily.	true	false
6.	Crippled children can be as good students as children who are not crippled.	true	false
7.	Very few crippled children are ashamed of being crippled.	true	false
8.	Most children feel uncomfortable when they are around crippled children.	true	false
9.	Crippled children do not get as excited about things as children who are not crippled.	true	false
10.	Crippled children do not become upset any more easily than children who are not crippled.	true	false
11.	Crippled children are often more shy than other children.	true	false
12.	Most crippled children will get married and have children.	true	false
13.	Most crippled children do not worry any more than anyone else.	true	false
14.	Teachers should not be allowed to punish crippled children.	true	false
15.	Crippled children are not as happy as children who are not crippled.	true	false

Adapted from the Attitude Toward Disabled Person Scale, (Yuker, H. E., Block, J. R., & Younng, J. H., 1970)

16. Very crippled children are harder to get along with than less crippled children. true false

17. Most crippled children expect special treatment. true false

18. Crippled children should not expect to live normal lives. true false

19. Most crippled children give up easily. true false

20. The worst thing that could happen to a child would be for him to be very badly hurt. true false

21. Crippled children should not have to compete with children who are not crippled. true false

22. Most crippled children do not feel sorry for themselves. true false

23. Most crippled children do not try as hard as children who are not crippled. true false

24. Most crippled children prefer to go to school with other crippled children. true false

25. Crippled children do not feel as good or as important as other children. true false

26. Most crippled children don't want more love and praise than other children. true false

27. It would be best if a crippled person would marry another crippled person. true false

28. Most crippled children do not need special attention. true false

29. Crippled children want you to feel more pity for them than other children. true false

30. Most crippled children behave differently than children who are not crippled. true false

CHILD EVALUATION FORM

PEER-PEER PROGRAM

I.D. _____ Sex _____

Grade _____ School _____

Age _____

Did you enjoy the Peer-Peer Program? ( ) Yes ( ) No

Why?

_____

_____

_____

_____

_____

Name a child that you would like to remain friends with.

List the activities which a disabled child could do which surprised you.

_____ _____

_____ _____

Would you like to continue with the Peer-Peer Program?

( ) Yes ( ) No Why?

_____

_____

Name any new activities you would like to have added:

_____

_____

_____

PARENT EVALUATION FORM

PEER-PEER PROGRAM

School Child Attends _____

Person filling out form ( ) Father ( ) Mother

Please list any positive or negative comments received from your child concerning the Peer-Peer Program.

_____

_____

_____

_____

_____

2. To what extent do you feel that your child has benefitted from the Peer-Peer Program?

3. Has the Peer-Peer Program affected your attitudes towards disabled people? How?

4. Would you like to see your child continue with the Peer-Peer Program? Why?